DOCUMENT RESUME

ED 254 140 HE 018 105

AUTHOR Dickason, Donald G.
TITLE The Impact of Secondary School Honors-Type Courses on College-Level Performance. College Board Report No. 84-1.
INSTITUTION College Entrance Examination Board, New York, N.Y.
PUB DATE 84
NOTE 14p.
AVAILABLE FROM College Board Publications, Box 886, New York, NY 10101 ($5.00).
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Academic Achievement; Class Rank; *College Admission; Grade Point Average; *Grading; Higher Education; High School Students; *Honors Curriculum; *Prediction; Secondary School Curriculum; Selective Colleges; Standardized Tests
IDENTIFIERS Pennsylvania State University; *Weighted Variables

ABSTRACT

The predictive value of secondary school honors-type courses for the college admissions process was studied, with attention to the proposition that an honors-type course grade should be promoted one full level (e.g., from a "B" to an "A"). The sample consisted of 950 freshmen at Pennsylvania State University in 1979. The students' self-reported information provided through the Student Descriptive Questionnaire of the Admissions Testing Program was also compared to data collected by the university's admissions office. The results did not support the contention that an honors course should be promoted by one letter grade, although the data did demonstrate a small but measurable positive impact on college performance by honors-type courses and showed also that honors-taking students had stronger secondary-school credentials and standardized test scores than non-honors students. It is concluded that weighting of the honors factors would slightly improve the prediction of students likely to get good college grades at a college that places significant weight on the predicted college grade point average in the selection process and that has a highly selective admissions competition for some or all of its programs. Summary statistics and regression values are included. (SW)

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College Board Report

No. 84-1

The Impact of Secondary School Honors-Type Courses on College-Level Performance

Donald G. Dickason

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The Impact of Secondary School Honors-Type Courses on College-Level Performance

Donald G. Dickason

College Board Report No. 84-1

College Entrance Examination Board, New York, 1984

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ABSTRACT

There have long been differences of opinion on the predictive value of secondary school honors-type courses in the college admissions process. This study disproves the proposition that an honors-type course grade should be promoted one full level (for example, from a *B* to an *A*) but it does demonstrate a smaller but measurable positive impact on college performance by honors-type courses. Honors-taking students do have stronger secondary school credentials and standardized test scores. More important, however, this study demonstrates that the dynamic relationships of secondary school predictors and college grades are significantly different for honors-taking versus nonhonors-taking students.

INTRODUCTION

A grade of *B* in an honors-type course should be treated as an *A* in college admissions, otherwise the student will be penalized in the selection process because those who take less rigorous courses will get higher grades, and will be selected over those who took the more rigorous courses. This is the lament often heard when students and parents petition selection committees for admission.

The rigor and challenge of the honors-type course is sufficient reward for those interested in maximizing their education. And besides, students do rise to the challenge and get approximately the same grades they otherwise would have gotten. This is the response by those who laud learning for learning's sake.

Which is correct? Admissions officers aver that this dilemma is one of the most difficult challenges they face. Certainly, virtually everyone desires to encourage the most rigorous and challenging course taking possible. What is the fairest response in the selection process?

Prior to 1982, The Pennsylvania State University had not given credit for nor acknowledged the taking of honors-type courses in its admissions process. The university desired to send notice to the secondary schools it served of the importance Penn State attaches to these courses. An investigation of the literature was undertaken to determine what other research revealed on this subject. The startling result was that no literature or research on this topic could be found. This writer, in addition, communicated with research staff members at the College Board, Educational Testing Service, and the American College Testing Program in the search for information.

Broader research that is available documents clearly that students taking honors-type courses generally are of higher ability, have done better in secondary school, and do better in college than their peers who do not take honors-type courses (Cahow et al. 1979; Chamberlain et al. 1978; Ruch 1968; Simms 1982; Weitzman 1982). But no studies could be found that investigated the honors-course factor versus the nonhonors-course factor, with other qualitative factors controlled.

A second avenue of inquiry concerning honors courses led to that of secondary school *rank*, weighted and unweighted. A survey of Pennsylvania high schools in 1981 revealed that about half had honors-type courses in their curriculums, and that virtually all of these schools weighted honors-type courses in the process of calculating rank. Colleges routinely use the weighted rank as an element in the selection process (Dickason 1981). However, the *weighting process varies almost infinitely* among secondary schools, and the *weighting schema is not typically shared* with the colleges. No research has been located which disaggregates weighted rank.

It could be reasoned that weighted rank may be a partial surrogate for the extra value proposed for grades in honors courses; but objective data are not available to test that rationale.

There is the need to understand the arithmetic result that would occur if the extra college admissions credit for honors-type courses recommended by proponents of an *A* for a *B*, a *B* for a *C*, etc., were utilized. If a student has taken 16 secondary school credits and has a *B* average, the high school GPA would be 3.0 (on a 4.0 scale) [(16 × 3) ÷ 16 = 3.0]. If one of the units were an honors type and were treated as an *A* grade, then the enhanced GPA would be [(15 × 3) + (1 × 4) ÷ 16 = 3.06], or a gain of .06 *HS*GPA for each honors-type course. Regression-based predicted college grade point average (*PC*GPA) analyses usually produce a multiplier of .30 to .50 for the HSGPA. Thus, the arithmetic result of the "promotion" of honors-type courses by one grade would suggest an improvement of college-level grade point average of about *.02* (.30 × .06) to about *.03* (.50 × .06) *for each honors-type course*. If an admissions eligibility level has been set at a particular level, the difference attributed to a number of honors courses could make a substantial difference. (In effect this is the null hypothesis of this paper, namely, that the research will show insufficient evidence to refute the above allegation. The data to follow have been gathered to test this.)

THE DATA USED

One thousand baccalaureate freshmen who entered the Pennsylvania State University in 1979 and who successfully completed the freshman year were chosen at random from approximately 10,300 who entered. All cases were re-reviewed, and 950 cases were complete enough for use. The secondary school transcripts were re-reviewed, and each case was coded for the number of honors-type courses taken. At the same time a "year end" tape was obtained from the College Board to determine if the information reported by the student using the Student Descriptive Questionnaire (SDQ) of the Admissions Testing Program (ATP) was generally consistent with that provided directly

to the University, and to determine specifically if the "honors" information available from the ATP, via the Student Descriptive Questionnaire, would be consistent or helpful in the analysis of this question.

Table 1 describes the *population's breakdown* as honors or nonhonors taking, based on Penn State's analysis, and based on the student's self-report on the SDQ.

Table 2 summarizes data for the honors and nonhonors groups *based on Penn State transcript analyses*.

The self-reported high school grades and rank in class are consistently higher than those recorded by Penn State. The reader should be aware that the SDQ self-reporting of grades is consistent but limited in its scope, and that rank is forced into one of six rank bands. One reason for the higher self-reported grades (and rank) via the SDQ is Penn State's practice of formulating its formal HSGPA based on grades 9 through 11, and of using "solid" courses only.

Table 3 summarizes data for the honors and nonhonors group *based on self-reported status from the SDQ*.

Table 1. Any Honors Courses Taken (Yes or No) as Classified from Penn State Records and as Classified by Students from the SDQ

	SDQ Classified		*PSU*
Penn State Classified	*Honors—Yes*	*Honors—No*	*Totals*
Honors—Yes	273	309	582
Honors—No	56	312	368
SDQ totals	329	621	950

Table 2. Summary Data

		Penn State Classification of:	
	Total	*Those Taking Honors Courses*	*Those not Taking Honors Courses*
Number	950	582	368
Average number of honors courses			
Penn State record	3.42	5.58	0
College GPA			
Spring 1980	2.69	2.80	2.52
HSGPA			
Penn State record	3.18	3.31	2.98
SDQ reported	3.38	3.46	3.25
SAT-V			
Penn State record	473	490	448
SDQ reported*	475	492	448
SAT-M			
Penn State record	526	551	486
SDQ reported*	526	551	482
SAT total			
Penn State record	999	1041	934
SDQ reported*	1001	1043	933
Class rank (percentile)			
Penn State record	79.1	83.3	72.5
SDQ reported	80.5	84.4	74.8

*These slight differences are due to the fact that the scores used by Penn State at the time of making the students record are not always the "final" data recorded by the College Board year-end summary.

Table 3. Summary Data

		Student Self-Reported Classification of:	
	Total	*Those Taking Honors Courses*	*Those not Taking Honors Courses*
Number	950	329	621
Average number of honors courses			
Penn State Transcript review	3.42	5.95	2.07
College GPA			
Spring 1980	2.69	2.90	2.58
HSGPA			
Penn State record	3.18	3.40	3.07
SDQ reported	3.38	3.51	3.31
SAT-V			
Penn State record	473	511	453
SDQ reported	475	516	454
SAT-M			
Penn State record	526	570	502
SDQ reported	526	570	502
SAT total			
Penn State record	999	1081	955
SDQ reported	1001	1086	956
Class rank (percentile)			
Penn State record	79.1	85.7	75.6
SDQ reported	80.5	87.0	77.2

Table 4. Single-Order Correlations with First-Year College GPA (*PSU* Honors/Nonhonors Classification)

	Total Group	*Honors Group*	*Nonhonors Group*
HSGPA			
Penn State record	.52	.47	.52
SDQ reported	.47	.46	.44
Class rank (percentile)			
Penn State record	.48	.43	.48
SDQ reported	.42	.37	.42
SAT-V			
Penn State record	.36	.35	.28
SDQ reported	.36	.24	.33
SAT-M			
Penn State record	.36	.29	.35
SDQ reported	.36	.29	.34
Honors, number of courses	.22	.16	—
Took honors, yes or no			
Penn State record	.20	—	—
SDQ reported	.23	—	—

Single-order correlations and multiple correlations analyze the various populations. Tables 4, 5, 6, and 7 summarize the results. (It should be noted that data are *not reported* in detail on the honors and nonhonors populations *for those classified by the student self-reports* in Table 3. The statistical results tended in the same direction as those for the Penn State classified groups, but generally yielded slightly less robust results.)

Table 5. Multiple-Order Correlation with First-Year College GPA

	Total Sample (N = 950)				*All Honors* (N = 582)*		*All Nonhonors* (N = 368)*	
Variables Included	*All PSU Factor*	*All SDQ Factor*	*All PSU Factor Except Honors Yes/No From SDQ*	*All PSU Factor Including Number of Honors Courses*	*All PSU Factor*	*All SDQ Factor*	*All PSU Factor*	*All SDQ Factor*
SAT-V, SAT-M, HSGPA and rank	.560 $F = 108.2$	.546 $F = 98.6$			.526 $F = 55.3$	.513 $F = 50.8$	.553 $F = 40.1$	.532 $F = 35.0$
Same, plus honors as yes or no (PSU classification)	.5605 $F = 86.5$	.548 $F = 79.6$	.5614 $F = 86.9$	.5610 $F = 86.6$				

*PSU record used to determine honors or nonhonors grouping.

Table 6. Regression Values for Multiple-Order Correlations

	Total Sample (N = 950)				*All Honors (N = 582)*		*All Nonhonors (N = 368)*	
Variables Included	*All PSU Factor*	*All SDQ Factor*	*All PSU Factor Except Honors Yes/No From SDQ*	*All PSU Factor Including Number of Honors Courses*	*All PSU Factor*	*All SDQ Factor*	*All PSU Factor*	*All SDQ Factor*
Base Combination					(1)*	(3)*	(2)*	(4)*
Constant	.300	−.041	—	—	.208	−.105	.435	.092
SAT-V	.00108	.00127	—	—	.00136	.00137	.00052	.00102
SAT-M	.00064	.00071	—	—	.00038	.00048	.00102	.00095
HSGPA	.335	.399	—	—	.329	.445	.349	.348
Percentile rank (in whole no.)	.0060	.0051	—	—	.0008	.0050	.0044	.0050
Alternate Combination (above plus honors factor)								
Constant	.308	—	.345	.323				
SAT-V	.00108	—	.00104	.00106				
SAT-M	.00063	—	.00059	.00061				
HSGPA	.334	—	.332	.335				
Percentile rank (in whole no.)	.0060	—	.0060	.0059				
Honors Yes or No	.0141	NA	.050					
No. of Hon. Courses	—	NA		.003				

*See Table 5 for calculation of the difference, if any, in college GPA for honors-taking and nonhonors-taking students who otherwise have the same credentials.

Table 7. Proportional Weight of Regression Values

Variables Included	Total Sample (N = 950) All PSU Factor	Total Sample (N = 950) All SDQ Factor	Total Sample (N = 950) All PSU Factor Except Honors Yes/No From SDQ	Total Sample (N = 950) All PSU Factor Including Number of Honors Courses	All Honors (N = 582) All PSU Factor	All Honors (N = 582) All SDQ Factor	All Nonhonors (N = 368) All PSU Factor	All Nonhonors (N = 368) All SDQ Factor
SAT-V	.210	.254	—	—	.281	.290	.098	.203
SAT-M	.135	.150	—	—	.080	.102	.213	.191
Total SAT	.345	.404	—	—	.361	.392	.311	.394
HSGPA	.410	.410	—	—	.367	.446	.479	.393
Rank	.246	.187	—	—	.272	.161	.210	.213
Total H.S.	.656	.597	—	—	.639	.607	.689	.606
Alternate Combination (above plus honors factor)								
SAT-V	.208	—	.206	.205				
SAT-M	.132	—	.084	.128				
Total SAT	.340	—	.290	.333				
HSGPA	.404	—	.411	.403				
Rank	.242	—	.247	.237				
Honors/Yes or No	.014	—	.053	—				
Number Honors Courses	—	—	—	.027				
Total H.S.	.660	—	.711	.667				

RESULTS AND INTERPRETATIONS

Consistency of SDQ and Penn State Data

A subsidiary benefit of this study is the analysis of the degree to which students' data self-reported by means of the Student Descriptive Questionnaire (SDQ) are consistent with that accumulated by The Pennsylvania State University's Admissions Office. Table 3 illustrates that the high school grade point average (HSGPA) and (high school) class rank are consistently calculated higher via the SDQ, than as accumulated by Penn State. However, the distribution of the data are very similar. For example, the means and standard deviations (S.D.) are as follows:

	PSU Recorded		SDQ Reported	
	Mean	S.D.	Mean	S.D.
HSGPA	3.18	.605	3.38	557
Percentile Rank (in whole nos.)	79.1	21	80.5	19

The ranges for both HSGPA and rank are restricted on the high side (4.0 and 99 percent, respectively). Thus higher mean values will be associated with modestly lower standard deviations due to the high side restricted range. In both cases, however, the cases seem to be *ordered* consistently (even though the mean values differ). This is born out by the single-order correlation with the criterion, spring 1980 college GPA correlation (single order).

	PSU Recorded	SDQ Reported
HSGPA	.52	.47
Rank	.48	.42

These factors included within the overall multiple regression (excluding honors factor) of .560 and .546 are very close. Clearly the institution could use SDQ reported factors instead of Penn State recorded factors and achieve very nearly the same selection determinations, and nearly the same validity levels.

Relationship between Numbers of Honors Courses and College GPA

The first honors-course question to be tested is whether or not there is a relationship between the number of honors courses taken and the college GPA attained. A single honors course value ($N = 1$) would respond to the question raised at the beginning of this paper advocating the promotion of each grade by one grade level (e.g., a *B* to an *A*, etc.) The arithmetic result of those proponents' argument should produce an increased college GPA of .02 to .03 per honors course taken (see The Data Used section).

This study did not reveal results of this order. The study result does indicate an increase in college GPA of .003 (see Table 6), obviously far below the arithmetic result of honors grade promoting proponents. The average number of honors courses taken of 3.42 would indicate an increased college GPA of .01026 (.003 × 3.42), which is hardly visible. The

average number of honors courses taken by those who took any honors course (i.e., excluding those who took none) is 5.58. For this group the average increase is .01678 (5.58 × .003), again not substantive.

Various other subsamples were analyzed and none revealed results suggesting that a full grade promotion "fudge factor" would be warranted.

The arithmetic process in reverse (i.e., starting from the gain of .01026), would suggest that the grade should be promoted by only about .05, e.g., from 3.00 (*B*) to 3.05, just a bit above a *B*.

Differing Prediction Dynamics of Honors and Nonhonors Groups

The lack of substantive relationship of the number of honors courses to the college GPA, coupled with the differential quality of the two groups (honors and nonhonors), leads to an examination of the prediction dynamics of the two different groups. This investigation proves more fruitful, and the general conclusion is that students who take any honors courses have a different set of relations and dynamics between secondary school elements and college performance.

First, and not surprisingly, those taking honors courses have done better in secondary school and do better in college (see Table 2). This is evidenced in a second way using the act of taking or not taking honors courses as a dichotomous (1, 0) criterion. There is a *single-order* correlation with college GPA of .20 to .23 (see Table 4). An individual taking honors courses would, on the *average*, have a college GPA about .20 higher (0 × .20 versus 1 × .20)

Multiple correlations using honors taking as a dichotomous variable provides far less helpful discrimination. Using Penn State honors-taking designators, the regression value for honors (1 or 0) is only .0141. Using SDQ honors-taking designators, the regression value for honors (1 or 0) rises only to .050. In other words, by using honors as a yes/no factor in a multiple regression formula, a very small increment in predicted college GPA is produced. To summarize to this point:

Process	*Gain in College GPA*
Using numbers of honors courses	.010 to .017 per course
Using honors yes/no in a multiple regression predictor	.0141 to .050

The next approach is to determine if the populations (i.e., honors-taking or nonhonors-taking) might relate differently to the college GPA if treated as a separate predictor group. This alternative provides more information. Thus, each of the tables has, in addition to data for the total sample of 950, subset data for honors takers ($N = 582$) and nonhonors takers ($N = 368$).

Note in Table 1 that Penn State's classification of honors taking produced a larger number than the SDQ-based classification. Penn State's classification is based on the existence of any one honors, accelerated, or advanced placement course in grades 9 through 11. The SDQ classification is based on the response to questions 12 through 17, which first request "the *latest* year-end or mid-year grade you received since the beginning of the ninth grade (emphasis added)." Then, the instruction continues, "If you received *the grade* (emphasis added) in an advanced, accelerated, or honors course . . . (so indicate)." Thus, the SDQ honors classification would pick up honors only if taken in the latest course grade reported. In addition it is possible that Penn State's identification is more liberal, in general, than the student's classification.

Although SDQ versus Penn State honors-taking classification varied measurably, the total regression values were very close, although the SDQ results tended to be slightly lower in most cases. The main intergroup analyses are performed on the Penn State honors-taking classification.

In addition to the not surprising data indicating that honors-taking students have stronger credentials and higher success than nonhonors-taking students, there is the interesting shift in the proportion of the regression weights accounted for by elements of the high school record versus standardized tests. Elements from Table 7 illustrate this point.

Proportion of Regression Weight	*All Honors Group N = 582*	*All Nonhonors Group N = 368*
SAT	.361	.311
H.S. Record	.639	.689

This suggests that students in the honors-taking group, the higher credentialed group, have their college performance *more* related to SATs than the nonhonors group—at first a seemingly illogical result. But the higher HSGPAs of the honors group are closer to the 4.0 absolute restriction. Also, the 3.31 HSGPA average for honors-taking students supports the contention that a large portion of honors takers receive *A*'s and *B*'s. In general, a 2-point scale (*A* and *B* and a few *C*'s) will statistically give less robust correlation results than a 3- to 4-point scale (*A*, *B*, *C*'s and a few *D*'s).

The movement from a 3- (or slightly more) point grading scale for nonhonors students to a 2- (or slightly more) grading scale will cause the results to suffer statistically when compared to an SAT scale with many more reference points.

Although Table 5 suggests similar multiple regression values, Tables 6 and 7 illustrate interesting variations internal to the regression formula and in the proportional weighting of the factors.

Using the two different regression formulas indicated as numbers (1), (2), (3), and (4) in Table 6, it is now possible to calculate the difference, if any, in college GPA for honors-taking and nonhonors-taking students who otherwise have the same credentials. Table 8 and Figures 1 and 2 illustrate

Table 8. College Predicted GPA for Honors or Nonhonors Takers (as classified from Penn State records, and as classified from Students' SDQs)

Data Set	Predictors				College GPAs: Honors Takers Classified by:		Nonhonors Takers Classified by:		Difference Honors versus Nonhonors Takers	
+ or − S.D.	SAT-V	SAT-M	HSGPA	Rank	PSU (1)	SDQ (3)	PSU (2)	SDQ (4)	PSU (1-2)	SDQ (3-4)
−2.0	302	369	1.96	37.1	1.68	1.54	1.82	1.62	−0.134	−0.075
	321	387	2.08	41.3	1.79	1.65	1.91	1.72	−0.119	−0.065
−1.6	340	405	2.20	45.5	1.89	1.76	1.99	1.82	−0.104	−0.055
	358	424	2.33	49.7	1.99	1.87	2.08	1.92	−0.089	−0.045
−1.2	377	442	2.45	53.9	2.10	1.98	2.17	2.02	−0.075	−0.035
	396	460	2.57	58.1	2.20	2.09	2.26	2.12	−0.060	−0.025
−0.8	415	478	2.69	62.3	2.31	2.20	2.35	2.22	−0.045	−0.015
	434	496	2.81	66.5	2.41	2.31	2.44	2.32	−0.031	−0.006
−0.4	452	515	2.94	70.7	2.52	2.42	2.53	2.42	−0.016	+0.004
	471	533	3.06	74.9	2.62	2.53	2.62	2.52	−0.001	+0.014
Mean	490	551	3.18	79.1	2.72	2.64	2.71	2.62	+0.014	+0.024
	509	569	3.30	83.3	2.83	2.75	2.80	2.72	+0.028	+0.034
+0.4	528	587	3.42	87.5	2.93	2.86	2.89	2.82	+0.043	+0.044
	546	606	3.55	91.7	3.04	2.97	2.98	2.92	+0.058	+0.054
+0.8	565	624	3.67	95.9	3.14	3.08	3.07	3.02	+0.072	+0.063
	584	642	3.79	100.1	3.24	3.19	3.16	3.12	+0.087	+0.073
+1.2	603	660	3.91	104.3	3.35	3.30	3.25	3.22	+0.102	+0.083
	622	678	4.03	108.5	3.45	3.41	3.34	3.32	+0.117	+0.093
+1.6	640	697	4.16	112.7	3.56	3.52	3.42	3.42	+0.131	+0.103
	659	715	4.28	116.9	3.66	3.63	3.51	3.52	+0.146	+0.113
+2.0	678	733	4.40	121.1	3.76	3.74	3.60	3.62	+0.161	+0.123
−1 S.D.	401	460	2.57	0.58	2.21	2.10	2.26	2.12	−0.056	−0.024
Mean	490	551	3.18	0.79	2.72	2.64	2.71	2.62	+0.014	+0.024
+1 S.D.	579	642	3.79	1.00	3.24	3.18	3.15	3.11	+0.083	+0.072

Figure 1.

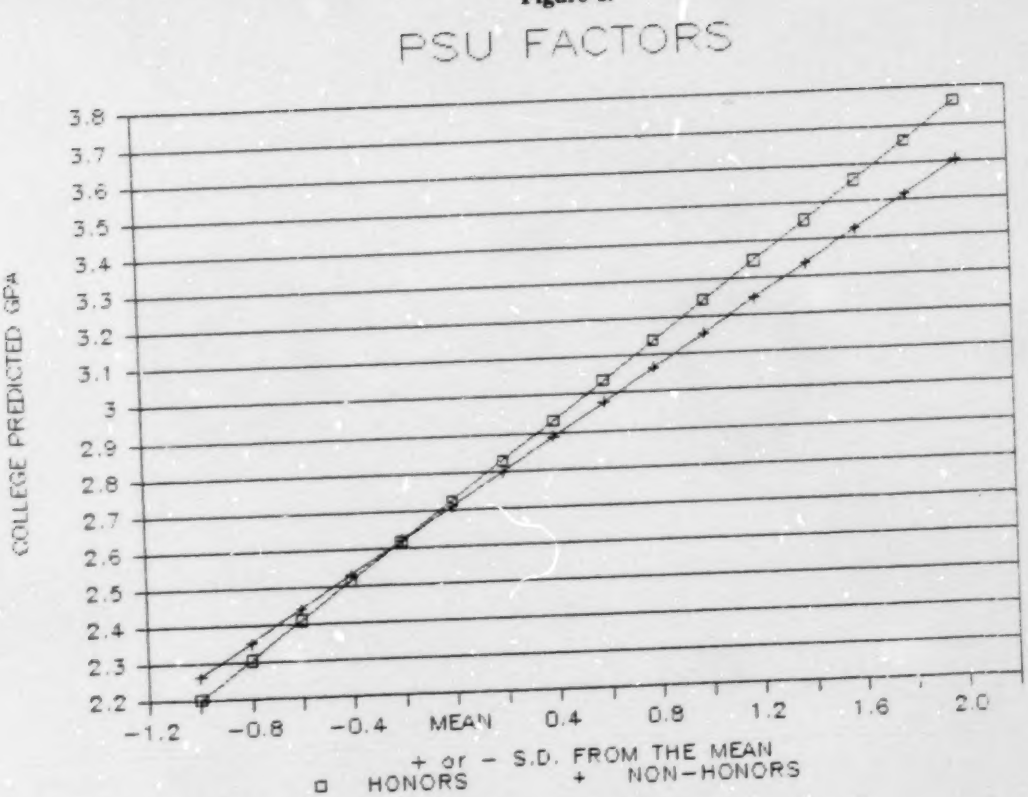
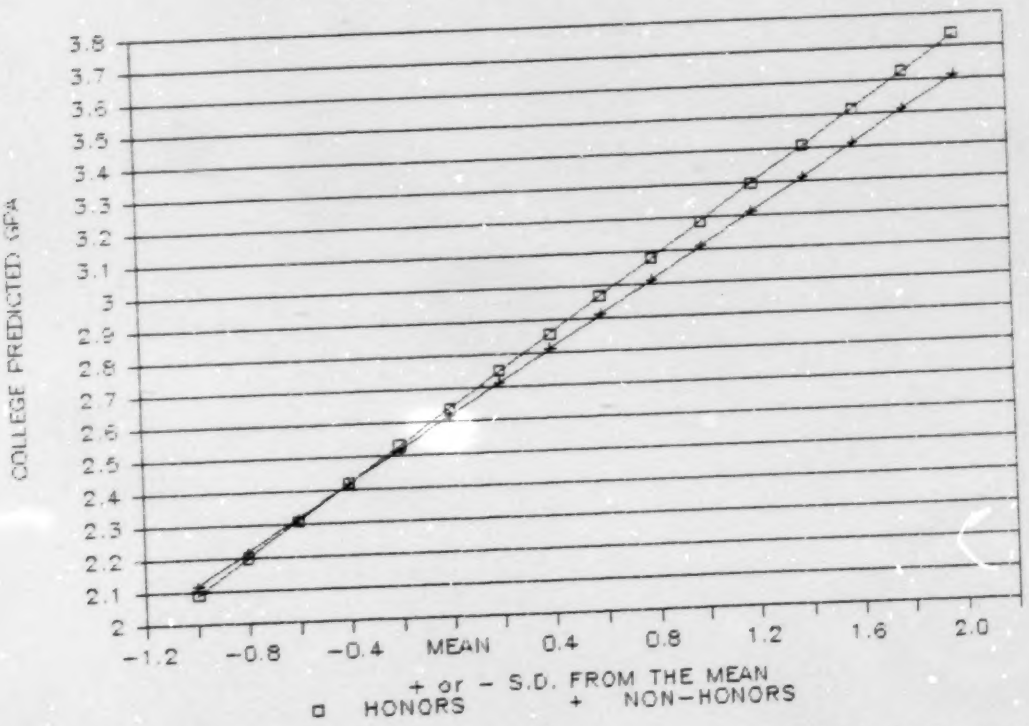


Figure 2.



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these two circumstances.

The differences of college GPAs between those taking or not taking honors courses range to about + .16 college GPA for the formula using Penn State recorded factors, and to + .12 college GPA using SDQ reported factors. In the more selective ranges (mean predictor values to approximately +1 standard deviation) the gain for Penn State recorded factors ranges from + .014 to + .087 college GPA; for SDQ reported factors, gains are from + .024 to + .073. Figures 1 and 2 illustrate these results graphically.

The actual gain in college GPA for the three different propositions tested in this paper are listed below.

Description	*Gain in College GPA*	
	Per Course	*Aggregate*
Proponents of full grade increase	.02 to .03	.110 to .165 (Assuming 5.5 honors course)
This paper, using numbers of honors courses	.003	.0165 (Assuming 5.5 honors course)
This paper, using separate honors/nonhonors populations		(Approximately)
PSU recorded factor	—	.01 to .09
SDQ reported factor	—	.02 to .07

SUMMARY AND CONCLUSIONS

The college GPA add-on regression values related to numbers of secondary school honors courses are measurable, but minimal. These results do not support the contention that an honors course should be promoted by one letter grade.

Although the regression values added in multiple regression analyses are small, the single-order correlation of approximately .20 (Table 4) suggests a visible relationship with college success. But the substantial interfactor correlations (e.g., numbers of honors courses with SAT-verbal, SAT-mathematical, HSGPA, and class rank) indicate that the honors factor has already been substantially accounted for by the use of these other factors. (Table 9 illustrates the degree to which it is possible to predict a student's honors-taking status from other measurable factors available in secondary school.)

These data replicate the results of other studies that demonstrate that honors-course takers are more able students and have higher credentials in secondary school, and do better in college.

The college GPA differences are greater for students with higher credentials. Thus, institutions that are highly selective will find the honors/nonhonors-taking differential more significant in their selection process than those institutions that are less selective.

Table 9. A Summary of the Relation of the Honors Course Circumstance to Various Other Factors

I. Single-Order Correlation, Number of Honors Courses with:

	Total Population (N = 950)	*Honors Takers Only (N = 582)*
College GPA	.22	.16
SAT-V	.30	.25
SAT-M	.35	.25
HSGPA	.28	.19
HS rank	.29	22

II.1 Multiple Order Correlation, (Honors takers only, N = 582)	*Number of Honors Courses as Dependent Criterion*
Predictor	*R (mult)*
SAT-V, SAT-M, HSGPA	.299
Above plus rank	.322

II.2 Multiple Order Correlation, (Total Population, N = 950)	*Taking of any Honors Courses (Yes or No) Classified By Penn State as Dependent Criterion*
Predictor	*R (mult)*
SAT-V, SAT-M, HSGPA	.366
Above plus rank	.375

II.3 Multiple Order Correlation, (Total Population, N = 950)	*Taking of any Honors Courses (Yes or No) Classified By SDQ as Dependent Criterion*
Predictor	*R (mult)*
SAT-V, SAT-M, HSGPA	.385
Above plus rank	.389

Various subpopulations have also been analyzed, and suggest further differentiation by curriculum. For example, there appears to be greater differentiation for those in or aspiring to science-focused curriculums as opposed to those in nonscience-focused curriculums.

In conclusion, if an institution places significant weight on the predicted college GPA in the selection process, and has a highly selective admissions competition for some or all of its programs, then the weighting of the honors factor would slightly improve the determination of those likely to get the best college grade. A per-honors-course grade promotion is not warranted based on these data and the interaction of predictor variables vary from population to population, so that prediction effectiveness may possibly be improved by disaggregating the population.

Additional techniques for evaluating the honors factor can be pursued. One variation would be to use the honors-taking population *in the secondary school* as a separated population, and thus as a basis for adjusting the college predictions (Willingham 1963).

A second approach would be the use of discriminant

analysis to help determine the impact of the honors factor. Further analyses of different collegiate population subsets (e.g., science versus nonscience focused students) would be helpful.

This study will have the first opportunity to be replicated in the summer and fall of 1984, using students who entered in the fall of 1983.

REFERENCES

Cahow, C.R., N.L. Christensen, J.R. Gregg, E.B. Nathans, H.A. Strobel, and G.W. Williams. 1979. Undergraduate Faculty Council of Arts and Sciences, Committee on Curriculum, Subcommittee on Advanced Placement. Unpublished report, Duke University.

Chamberlain, P.C., R.C. Pugh, and J. Schellhammer. 1978. Does Advanced Placement Continue Throughout the Undergraduate Years? *College and University*, Winter, 195–200.

Dickason, D.G. 1981. Admissions Criteria Questionnaire. *Feedback* (The Pennsylvania State University) September 1981.

Ruch, C. 1968. A Study of the Collegiate Records of Advanced Placement and Non-Advanced Placement Students. *College and University*, Winter, 207–210.

Simms, D. 1982. Comparison of Academic Performance Between AP and Non-AP Students at the University of Michigan. Unpublished report, University of Michigan.

Weitzman, R.A. 1982. The Prediction of College Achievement by the Scholastic Aptitude Test and the High School Record. *Journal of Educational Measurement*, Vol. 19, No. 3, 179–191.

Willingham, W.H. 1963. Adjusting College Predictions on the Basis of Academic Origins. In *Twentieth Yearbook of the National Council on Measurement in Education*, Martin Katz, ed. East Lansing, Michigan: National Council on Measurement in Education, 1–6.

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